



Office of Information Technology Services

Applications Portfolio Management Tool

APM Analysis – Getting Started

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1. Document History

Revision #	Revision Date	Description of Change	Author
1.0	7/20/2006	Initial Document	C. Richards
1.1	9/1/2006	Revision to Architectural Fit information.	C. Richards
1.2	9/25/2006	Added information on formatting reports in EXCEL. Added Suggested Analysis technique.	B. Swartz

2. Purpose

The purpose of this document is to assist agencies with Applications Portfolio Management analysis. This document provides a starting point for users who wish to identify applications requiring remediation and to determine the order in which the remediation plans should be executed.

This document assumes that users have gone through APM Analysis training. If you have not, please review the 'APM Analysis Training' presentation in the NC Help section of the Portfolio Management tool. Users must be authorized to run Portfolio Reports. The CIO of your agency can request authorization for you.

3. Applications Remediation Order Report

The Applications Remediation Order report will provide you with information to assess applications from both a functional and technical perspective. The report can be created using combinations of attributes collected in APM.

Note: The report uses the attribute 'Architectural Fit Score'. This attribute is derived from answering the questions on the Architectural Fit tab; however, the corresponding scores do not change in real time. The scores for this attribute need to be recalculated by the APM Administrator. This recalculation will be performed at the end of each week.

3.1 Create Report

This report lists the applications that need remediation and the order in which they should be examined. An application is deemed to need remediation by combining the Application Risk Score, Operational Performance Score and Architectural Fit Score; the higher the score, the greater the need for remediation. The formula for Remediation Order is $(\text{Application Risk Score} + (100 - \text{Operational Performance Score}) + (100 - (\text{Architectural Fit Score} * 10))) + 100$. This calculation results in each category being weighted approximately the same.

3.1.1 Build Report

Log in to the tool
Click on Reports
Select Manage Reports tab
Select '**Application List/Grouping**'
Click '**Define New**'
Select Attributes:

- Application Name
- Application Remediation Order
- Application Criticality

- Application Risk Score
- Operational Performance Score
- Architectural Fit Score
- Alignment to Department Strategy*
- 2006 to 2010 Average Budget Application Costs

Sorting Options:

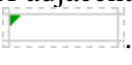

- Descending on Application Remediation Order

* **Alignment to Department Mission** can also be used

Save the report and then generate it in Excel for best viewing.

3.1.2 Format Report in EXCEL

Formatting will allow the user to easily manipulate data for analysis.

- Delete blank rows at top of report
- Select cell to the right of first application name
- Select Windows -> Remove Split
- Select Windows -> Freeze Panes
- Select and Delete Extra Columns (See Appendix)
- To set up sort in EXCEL 2003, select Data -> Filter -> Auto Filter
- To set up sort in earlier versions:
 - Position cell pointer on first field name of database
 - Click on Data - > Sort
 - Select field to sort
 - Click OK
- Convert numbers stored as text to numbers (See Appendix)
 - On the **Tools** menu, click **Options**.
 - On the **Error Checking** tab, make sure that the **Enable background error checking** check box and the **Number stored as text** check box are both selected, and then click **OK**.
 - On the worksheet, select any single cell or range of adjacent cells that has an error indicator in the upper-left corner .
 - **Note:** All cells in the selection must be adjacent.
 - Next to the selected cell or range of cells, click the error button  and then click **Convert to Number**.
- SAVE

3.2 Analyze Report

Applications that need the most attention will be listed at the top of the report. However, agencies should prepare a remediation strategy for all applications on this report.

3.2.1 Techniques for Additional Analysis

3.2.1.1 Filter on Application Criticality

Applications that are Statewide Critical should be first, then applications that are Department Critical, followed by Program Critical and Non-Critical applications.

3.2.1.2 Run Each Analysis Four Times

- **Analysis 1 – Architectural Fit Score - sort ascending**
This analysis provides data on an application's criticality to the agency and on how well the application fits into the statewide architecture. As you move down the list of applications, you will come to a point where the applications do not require remediation and only need to be maintained.
- **Analysis 2 - Application Risk Score - sort descending**
This analysis provides data on an application's criticality to the agency and on the amount of risk the application presents. As you move down the list of applications, you will come to a point where the applications do not require remediation and only need to be maintained.
- **Analysis 3 - Operational Performance Score - sort ascending**
This analysis provides data on an application's criticality to the agency and how well an application performs technically. As you move down the list of applications, you will come to a point where the applications do not require remediation and only need to be maintained.
- **Analysis 4 - 2006 to 2010 Average Budget Application Costs - sort descending**
This analysis provides data on an application's criticality to the agency and the 2006-2010 average budgeted cost for the application. This analysis may be useful in making application retirement decisions.

You may want to execute the Save As command after each of the four analyses.

4. Develop Agency Application Roadmap

When you have worked through Section 3 for each application, you are ready to update the application roadmap in the tool. Each application has a section on the 'Application Info' tab labeled 'Application Roadmap'.

Analysis Start Date	7/1/2005	Initial Production Year	2005
Estimated Lifespan (months)	60	Retirement Date	7/1/2010
Latest Release	1/16/2006	System Age	1

▶ Release Notes

▶ Application Roadmap

2005	2006	2007	2008	2009	2010
Maintain	Maintain	Enhance	Enhance	Maintain	Retire

The Application Roadmap is a sequence of annual labels that indicate the long-term strategy for an application. An application's Enhancement/Replacement Costs (on Budget Cost tab) should reflect increased costs in years where "maintain" is not the value. Additional information about enhancements can be recorded in APM by using the 'Enhancement Request' link from the Application Info tab.

APM will include attributes for the range of years between *Analysis Start Date* and *Retirement Date*. For each fiscal year one of the following choices has to be made about each application: maintain, upgrade, retire, replace, or consolidate.

- ❖ **Maintain** – Only ordinary activity (break fix, data level support, backup, etc.) is planned for the period. Per Gartner, maintenance comprises very small enhancements (less than 2 weeks in duration), defect repair and "other" changes that don't affect application function. Maintenance is, or should be, a "keep the lights on" activity. Maintenance activities are considered "mandatory".
- ❖ **Enhance** – Per Gartner, enhancements are projects that add, change or delete functionality from the software. Enhancements may include stand-alone "subsystem" development. A new version of the application, or any significant enhancement, is planned for the period. This includes technical renovating, including re-hosting, rewriting, code conversion, SOA enabling, re-architecting, modernizing, etc.
- ❖ **Retire** – The application is due for decommissioning without replacement. This includes sunset or eliminate.
- ❖ **Replace** – The application will be replaced by a new application, and retired. This includes replacement with COTS or GOTS with no or minimal (less than 20%) customization, COTS or GOTS with greater than 20% customization, or custom design.
- ❖ **Consolidate** – The application will be combined with another application to form one new application.

As stated above, an application's 'Enhancement/Replacement Costs' (on Budget Cost tab) should reflect increased costs in years where "maintain" is not the value. The 'Enhancement/Replacement Costs' line is highlighted in the picture below.

Application Info Budget Cost Strategic Impact Architectural Fit						
<input type="checkbox"/> Show/Hide cost centers						
Levels	2006	2007	2008	2009	2010	Total
[-] Total Cost	\$ 37,000	\$ 67,000	\$ 87,000	\$ 37,000	\$ 37,000	\$ 265,000
[-] Project Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
[-] Application Costs	\$ 37,000	\$ 67,000	\$ 87,000	\$ 37,000	\$ 37,000	\$ 265,000
[-] Operations & Maintenance	\$ 37,000	\$ 37,000	\$ 37,000	\$ 37,000	\$ 37,000	\$ 185,000
[-] Internal Personnel	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
[-] External Personnel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
[-] Other External Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
[-] Infrastructure-Hardware	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
[-] Infrastructure-Software	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 60,000
[-] Other (Describe)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
[-] Enhancement/Replacement Costs	\$ 0	\$ 30,000	\$ 50,000	\$ 0	\$ 0	\$ 80,000

5. Develop Long-term Strategy

Each agency should develop a long-term strategy to guide the continuing management of each application throughout its life cycle. Ongoing management prevents applications from slowly becoming problematic or unstable. Good management of legacy applications will optimize the return on an agency's IT investments.

Analysis and review of agency applications should be included as part of annual or biennial business and IT planning.

Appendix

A8 Application 1

Delete Extra Column (Column 'C')

Convert Numbers Stored as Text to Number

Test, Department of (as of 09/25/06)

Application Name	Application Remediation Order	Application Criticality	Application Risk Score	Operational Performance Score	Architectural Fit Score	Alignment to Department Strategy	2006 to 2010 Average Budget Application Costs
Application 1	313.78	4 - Statewide Critical	80.00	52.22	1.40	3 - Meets a critical strategy & business/program priority	20,000.00
Application 2	306.11	2 - Program Critical	50.00	33.89	1.00	5 - Meets all strategic & business/program priorities	0.00
Application 3	298.89	2 - Program Critical	66.00	51.11	1.60	5 - Meets all strategic & business/program priorities	900.00
Application 4	298.89	4 - Statewide Critical	66.00	51.11	1.60	3 - Meets a critical strategy & business/program priority	54,776.40
Application 5	287.67	4 - Statewide Critical	45.00	43.33	1.40	3 - Meets a critical strategy & business/program priority	200.00
Application 6	280.67	2 - Program Critical	59.00	43.33	3.50	2 - Meets minimal number of strategy & program priorities	200.00